

## DOCUMENT RESUME

ED 341 673

SP 033 563

AUTHOR Hipps, Elizabeth Smith; Halpin, Glennelle  
TITLE Job Stress, Stress Related to Performance-Based Accreditation, Locus of Control, Age, and Gender As Related to Job Satisfaction and Burnout in Teachers and Principals.  
PUB DATE Nov 91  
NOTE 28p.; Paper presented at the Annual Meeting of the Mid-South Educational Research Association (Lexington, KY, November 13-15, 1991).  
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)  
EDRS PRICE MF01/PC02 Plus Postage.  
DESCRIPTORS \*Burnout; \*Correlation; Elementary Secondary Education; \*Job Satisfaction; Locus of Control; Negative Attitudes; Principals; Public School Teachers; Rating Scales; State Standards; Stress Management; \*Stress Variables; \*Teacher Certification; Teaching (Occupation)  
IDENTIFIERS \*Performance Based Certification

## ABSTRACT

The purpose of the study described here was to: (1) determine the amount of variance in burnout and job satisfaction in public school teachers and principals which could be accounted for by stress related to the state's performance-based accreditation standards; (2) examine the relationship between stress related to state standards and the age and gender of the educators; and (3) develop measures of educator job stress common to both teachers and principals and stress related to the state performance-based accreditation standards. Surveys were sent to teachers (N=445) and principals (N=128). Responses were received from 219 teachers and 58 principals. A cross-validation study of nonrespondents yielded usable responses from 13 additional teachers and 7 principals. Five factors describing the dimensions of educator stress were identified: (1) job overload; (2) subordinate-superordinate relationships; (3) relationships with students; (4) relationships with peers; and (5) salary and compensation. Results of the study suggest that educators are experiencing a significant amount of stress related to their everyday job situations and to performance-based accreditation standards, and that this stress is mediated by locus of control. Forty references are listed and 11 tables displaying the data are attached. (LL)

\*\*\*\*\*  
\* Reproductions supplied by EDRS are the best that can be made \*  
\* from the original document. \*  
\*\*\*\*\*

Job Stress, Stress Related to Performance-Based Accreditation, Locus of Control, Age, and Gender As  
Related to Job Satisfaction and Burnout in Teachers and Principals

ED341673

Elizabeth Smith Hipps and Glennelle Halpin  
Auburn University

Paper presented at the meeting of the Mid-South Educational Research Association,  
Lexington, Kentucky, November, 1991

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

- ☐ This document has been reproduced as received from the person or organization originating it.
- ☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS  
MATERIAL HAS BEEN GRANTED BY

G. Halpin

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)."

SP033 563

JOB STRESS, STRESS RELATED TO PERFORMANCE-BASED  
ACCREDITATION, LOCUS OF CONTROL, AGE, AND GENDER AS RELATED  
TO JOB SATISFACTION AND BURNOUT IN TEACHERS AND PRINCIPALS

Recent educational reform imperatives have led to the adoption of performance-based accreditation by a number of states as a means of assuring that local school systems are maintaining quality educational programs (Buhler & Roebuck, 1987; Saterfiel & Woodruff, 1985). [State] schools will be subject to a new performance-based accreditation system which is being phased in. Some researchers have found that increases in state-mandated programs are stressful to teachers (Hoover-Dempsey & Kendall, 1982; Swick & Hanley, 1980). Many educators may experience increased stress as a result of the implementation of the [State] Performance-Based Accreditation System.

Friesen (1986) postulated a negative stress cycle with three distinct stages: (a) demands which one perceives as exceeding coping resources; (b) imbalance; and (c) a maladaptive response such as burnout or mediation by some outside influence which reduces the stress. Farber (1984) defined burnout as "the final step in a progression of unsuccessful attempts to cope with negative stress conditions." Stressed educators may experience feelings of decreased job satisfaction, inability to make decisions, diminished self-esteem, and lowered self-confidence and sense of professional competence (Kyriacou & Sutcliffe, 1978; Needle, Griffin, Svendsen, & Berney, 1980; Swick & Hanley, 1980; Weiskopf, 1980). Many who experience these feelings may leave the profession. Many who stay in teaching while under stress may have negative attitudes and diminished capacities, or they may be subject to any of a large number of physical or psychological disorders (Schwartz, Olson, Bennett, & Ginsberg, 1983). An internal locus of control has been found to be related to lower educator stress (Farkas, 1983; Halpin, Harris, & Halpin, 1985; Selaty, 1988; Stroud, 1987).

### Purpose of the Study

The primary purpose of this study was to determine the amount of variance in burnout and job satisfaction in [State] public school teachers and principals which could be accounted for by stress related to the [State] Performance-Based Accreditation standards and job stress with locus of control, age, and gender serving as moderator variables. A secondary objective of the study was to examine the relationship between stress related to the [State] Performance-Based Accreditation standards and the age and gender of the educators. A final goal, necessary for the achievement of the preceding objectives, was to develop measures of educator job stress common to both teachers and principals and stress related to the [State] Performance-Based Accreditation standards.

### Methodology

In order to develop a measure of educator job stress, a pilot study was undertaken. Events and conditions which had been found to be stressful to teachers or principals were gleaned from the literature and arranged in the form of 96 Likert-type items. After a review by five teachers and one principal, the pilot measure was administered to teachers and principals in two [State] school systems and in two graduate classes at a small university. Responses from the 236 participating educators were subjected to principal axis factor analysis. Five factors were identified, and the data were reduced to 31 items accounting for 59.8% of the common variance. One item was discarded and nine new items were constructed for the final measure of educator stress. The confirmation of the five factors on the final instrument was achieved by means of a cross-validation of the results of the pilot administration with those of the survey administration.

The sample selected for the survey phase of the study consisted of 445 teachers and 128 principals from nine school systems which participated in an impact study of [State] Performance-Based Accreditation during the 1989-1990 school year. Usable responses were received from 219 teachers and 58 principals. Because the rate of response was low (53.6%), a cross-validation study of

nonrespondents was undertaken. A sample of 23 teachers and 7 principals was selected at random from those who had not returned their completed surveys, and a second copy of the survey was sent to each of these subjects. Thirteen teachers and seven principals from the cross-validation sample returned usable surveys.

### Instruments

All subjects completed the Job in General Scale; the [State] Performance-Based Accreditation Standards Stress Measure; the Measure of Educator Stress; the Maslach Burnout Inventory; the Internal, Powerful Others, and Chance Scales; and a demographic sheet for age, gender, and years of experience.

The Job in General Scale is a global measure of job satisfaction developed by Smith, Kendall, and Hulin (1982). The measure consists of 18 items, with higher scores indicating greater job satisfaction. Coefficient alpha reliability obtained by the authors was .91 (Ironson, Smith, Brannick, Gibson, & Paul, 1989), and the reliability with the survey sample was .86.

The [State] Performance-Based Accreditation Standards Stress Measure, developed for this study, contains 43 items representing categories of performance-based accreditation standards defined by the [State] State Department of Education (1989). In a Likert-scale response format ranging from (0) not stressful to (4) extremely stressful, respondents indicate the perceived stress associated with each standard. The coefficient alpha internal consistency reliabilities for the six subscales were (a) Student Performance, .87; (b) Personnel, .76; (c) School Environment, .72; (d) Opportunities to Learn, .93; (e) Student Progress, .93; and (f) Leadership and Planning, .90 ( $N = 277$ ).

The Measure of Educator Stress consists of 39 items representing conditions and events which are stressful to educators. Respondent ratings for each item range from (0) not stressful to (4) extremely stressful. Factor analysis of the data gathered in the pilot administration yielded five factors: Job Overload, Subordinate-Superordinate Relationships, Relationships with Students,

nonrespondents was undertaken. A sample of 23 teachers and 7 principals was selected at random from those who had not returned their completed surveys, and a second copy of the survey was sent to each of these subjects. Thirteen teachers and seven principals from the cross-validation sample returned usable surveys.

### Instruments

All subjects completed the Job in General Scale; the [State] Performance-Based Accreditation Standards Stress Measure; the Measure of Educator Stress; the Maslach Burnout Inventory; the Internal, Powerful Others, and Chance Scales; and a demographic sheet for age, gender, and years of experience.

The Job in General Scale is a global measure of job satisfaction developed by Smith, Kendall, and Hulin (1982). The measure consists of 18 items, with higher scores indicating greater job satisfaction. Coefficient alpha reliability obtained by the authors was .91 (Ironson, Smith, Brannick, Gibson, & Paul, 1989), and the reliability with the survey sample was .86.

The [State] Performance-Based Accreditation Standards Stress Measure, developed for this study, contains 43 items representing categories of performance-based accreditation standards defined by the [State] State Department of Education (1989). In a Likert-scale response format ranging from (0) not stressful to (4) extremely stressful, respondents indicate the perceived stress associated with each standard. The coefficient alpha internal consistency reliabilities for the six subscales were (a) Student Performance, .87; (b) Personnel, .76; (c) School Environment, .72; (d) Opportunities to Learn, .93; (e) Student Progress, .93; and (f) Leadership and Planning, .90 ( $N = 277$ ).

The Measure of Educator Stress consists of 39 items representing conditions and events which are stressful to educators. Respondent ratings for each item range from (0) not stressful to (4) extremely stressful. Factor analysis of the data gathered in the pilot administration yielded five factors: Job Overload, Subordinate-Superordinate Relationships, Relationships with Students,

Relationships with Peers, and Salary and Compensation. Reliabilities obtained from the pilot and survey administrations are presented in Table 1.

---

Insert Table 1 about here

---

The Maslach Burnout Inventory, Second Edition, Form ED (Maslach & Jackson, 1986) was used to measure the frequency of the respondents' feelings regarding three components of burnout: Emotional Exhaustion, Depersonalization, and reduced Personal Accomplishment. The Likert-type response scale for this measure ranges from (0) Never to (6) Every Day. Higher scores on the Emotional Exhaustion and Depersonalization subscales and lower scores on the Personal Accomplishment subscales indicate higher levels of burnout. The reported reliability statistics of Form ED consist of Cronbach's coefficient alpha estimates of .76 respectively for the Depersonalization and Personal Accomplishment subscales and .90 for the Emotional Exhaustion subscale ( $N = 469$ ) (Iwanicki & Schwab, 1981). Internal consistency reliabilities determined for the survey sample were .91 for Emotional Exhaustion, .69 for Depersonalization, and .74 for Personal Accomplishment ( $N = 277$ ).

Locus of control was measured using the Levenson's Internal, Powerful Others, and Chance Scales (1981) which were developed to measure expectancies of three dimensions of control: internal, external control by powerful others, and external control by chance. A Likert-type response format is presented for each statement, ranging from strongly disagree (-3) to strongly agree (+3), with the 0 point excluded. High subscale scores indicate a perceived belief in the orientation to control represented by the subscale. Levenson (1974) obtained test-retest reliabilities of .64, .77, and .79 for the Internal, Powerful Others, and Chance Scales, respectively ( $N = 96$ ). Coefficient alpha reliabilities for the three subscales with the survey sample were .60 for the Internal Scale, .75 for the Powerful Others Scale, and .69 for the Chance Scale ( $N = 277$ ).

### Data Analysis and Results

Cross-validation procedures were performed to compare the subscale means derived from the respondents in the survey sample ( $N = 277$ ) and those of the nonrespondent sample ( $N = 20$ ). The resulting values of  $t$ , presented in Table 2, did not exceed the  $\pm 1.96$  value needed for significant differences on any scale, and the result based on the respondents in the survey sample were considered representative of the population.

---

Insert Table 2 about here

---

Canonical correlation analysis was used to determine whether a multivariate relationship existed between the Set 1 variables of job stress, stress related to the [State] Performance-Based Accreditation standards, locus of control, age, and gender and the Set 2 variables of emotional exhaustion, depersonalization, and personal accomplishment. Intercorrelations among the variables are presented in Table 3. The canonical correlation analysis indicated the existence of a significant relationship. Of the three possible canonical roots, two were determined to be significant at the .05 level. Canonical weights of the three possible roots are presented in Table 4. Eigenvalues and canonical correlations are presented in Table 5. Wilks' lambda and the levels of significance of the three possible roots are presented in Table 6. Canonical loadings and cross-loadings, adequacy indexes, and redundancy indexes are presented in Table 7.

---

Insert Tables 3, 4, 5, 6, and 7 about here

---

The adequacy indexes for Root 1 show that the canonical variates for the Set 1 and Set 2 variables represent them well, and the redundancy index for the Set 2 variate indicates that a meaningful proportion (28.10%) of the raw score variance in the Maslach Burnout Inventory is accounted by the canonical variate representing the Set 1 variables. The redundancy index for the Set 1 variate indicates that 11.31% of the raw score variance in the Set 1 variables is accounted for by the canonical variate representing burnout.

The canonical cross-loadings for Root 1 on the Job Overload (.5893), Subordinate-Superordinate Relationships (.4209), Relationships with Students (.4922), and Salary and Compensation (.4482) subscales of the Measure of Educator Stress show that these stressors made significant and meaningful contributions to the burnout variance. Only Relationships with Peers (.2102) did not have an interpretable cross-loading on Root 1, indicating the lack of a meaningful relationship with burnout.

Cross-loadings of interpretable size were also obtained for the School Environment (.3065), Opportunities to Learn (.3304), Student Progress (.3006), and Leadership and Planning (.3221) subscales of the [State] Performance-Based Accreditation Standards Stress Measure, indicating a relationship between these stressors and burnout. School environment standards address aspects of school climate. Opportunities to learn standards address curricular offerings, instructional strategies, supplies, suppliers, support services, class size, and pupil-teacher ratios. Student progress standards address assessment of student learning. Leadership and planning standards address the leadership at the school, system, and community levels.

The negative cross-loading for the Internal Scale (-.3071) and the positive cross-loading for the Powerful Others (.3152) and Chance (.3316) Scales indicate that educators with a more internal control orientation experienced less burnout and that educators with more external control orientations, either toward control by powerful others or by chance, experienced more burnout.

The strong cross-loadings obtained for the Emotional Exhaustion (.7210), Depersonalization (.4443), and Personal Accomplishment (-.3564) subscales of the Maslach Burnout Inventory on Root 1 show that an educator who experiences a high degree of job stress and stress related to the [State] Performance-Based Accreditation standards and has an orientation to control by chance or powerful others is more likely to experience burnout.

The low adequacy and redundancy indexes and the lack of interpretable cross-loadings for Root 2 suggest that caution is needed when interpreting the results obtained. The redundancy indexes indicate that only 4.18% of the raw score variance in burnout is accounted for by the Set 1 canonical variate and only 1.67% of the raw score variance in the Set 1 variables is accounted for by the canonical variate representing burnout. However, the canonical loadings suggest that increasing stress related to job overload (.4018) and decreasing stress related to personnel standards (-.3617), school environment standards (-.5104), opportunities to learn standards (-.4906), student progress standards (-.4902), and leadership and planning standards (-.4028) for females (gender = .5336) may be related to greater feelings of personal accomplishment (.6473) and reduced depersonalization (-.5817) burnout.

Canonical correlation analysis was also used to determine whether a multivariate relationship existed between the Subset 1a variables (the six subscales of the [State] Performance-Based Accreditation Standards Stress Measure) and Subset 1b (age and gender). Canonical correlations of the two possible canonical roots were .1949 and .1434, and neither was found to be significant.

Multiple regression analysis was employed to examine the relationships between the Set 1 variables (job stress, stress related to the [State] Performance-Based Accreditation standards, locus of control, age, and gender) and job satisfaction, and a significant relationship was found to exist. The results of the multiple regression are presented in Table 8, and the results of the analysis of variance are reported in Table 9. Job satisfaction scores increased as scores reflecting levels of stress related

to subordinate-superordinate relationships ( $\beta = -.1906$ ) and relationships with students ( $\beta = -.2319$ ) decreased ( $p < .05$  and  $.01$ ), respectively.

---

Insert Tables 8 and 9 about here

---

Cross-validation procedure were performed on the results of the significant canonical correlation analysis and the multiple regression analysis by dividing the survey sample into two subsamples. The resulting  $z$  values from the tests of significance of the differences between correlation coefficients obtained did not exceed  $\pm 1.96$ ; therefore, the primary analyses were considered stable and not sample specific. Table 10 presents the Fisher's  $z$  test for the cross validation of the first canonical correlation, and Table 11 presents the Fisher's  $z$  test for the cross-validation of the multiple regression analysis.

---

Insert Tables 10 and 11 about here

---

### Discussion

The data from the pilot phase of this study indicate the existence of a multidimensional factor representing stress common to teachers and principals. Five factors describing the dimensions of educator stress were identified by this study : (a) Job Overload, (b) Subordinate-Superordinate Relationships, (c) Relationships with Students, (d) Relationships with Peers, and (e) Salary and Compensation. Cross-validation with the survey sample supported the existence of the five factors.

The data from the survey portion of this study indicate that relationships do exist between job satisfaction and burnout and the set of variables including job stress, stress related to the [State] Performance-Based Accreditation standards, locus of control, age, and gender in [State] teachers and

principals. The cross-validation procedure comparing the respondent sample ( $N = 277$ ) with the nonrespondent sample ( $N = 20$ ) indicated the validity of results for all the subscales.

Findings which relate burnout to educator stress have been supported by those of Harris, Kagay, and Leichenko (1985) who found that teachers who were experiencing high degrees of stress also mentioned burnout as a problem for them and were more likely to consider leaving the profession than teachers who did not claim to be working under stress. Sarros (1988) also identified relationships among stress, a desire to leave work, and burnout in administrators. A lower perception of stress from peer relationships than from the other factors by the survey sample may account for the lack of a significant relationship between burnout and peer relationships in this study. Peer relationships were described as not stressful, slightly stressful, or moderately stressful by 86.6% of the respondents.

The relationships found between burnout and stress related to performance-based accreditation standards may exist because educators believe that implementation of these standards is beyond their control but that they will still be held accountable. Phillips and Lee (1980) reported that being held accountable for learning outcomes was stressful to teachers, because the teachers believed that these outcomes were largely the result of factors over which they had no control. Adams (1975) found that teachers felt frustrated and burned out when changes were demanded of them without their being given the means and authority to make the changes, and administrators were found to be highly stressed by compliance with rules in several studies (Brimm, 1983; Gmelch & Swent, 1981, 1982; Lam, 1988; Manera & Wright, 1981).

Research by Phares (1976) supports findings concerning the relationship between burnout and locus of control. Phares reported that an ability to cope with a potentially threatening situation was directly related to the expectancy that the situation was controllable, rather than under the influence of

chance or of other powerful people. Kyriacou and Sutcliffe (1979) obtained a significant correlation between self-reported stress in teachers and externality.

The relationships found in Root 2 of the first canonical correlation analysis are supported by the findings of Hoover-Dempsey and Kendall (1982), which revealed some positive aspects of stress, and by Schwab (1983), who found that males in his study had more negative attitudes toward their students than females. The low adequacy and redundancy indexes for this root indicate a need for caution and further research concerning these findings.

The canonical correlation analysis of the Subset 1a variables of the subscales of the [State] Performance-Based Accreditation Stress Measure and the Subset 1b variables of age and gender indicated that the subjects in the survey sample did not differ in their amount of stress related to the [State] Performance-Based Accreditation standards on the basis of age or gender. Buhler and Roebuck (1987) found that all groups of teachers had negative feelings concerning reform efforts in Texas, and Lam (1988) reported that stress related to externally initiated school policy was experienced by a majority of principals in his study.

Relationships between job satisfaction and stress are supported by the research of Kyriacou and Sutcliffe (1978), who cited poor relationships with administrators and self-reported stress in teachers as being associated with reduced job satisfaction. Moracco, D'Arienzo, and Danford (1983) found that teachers who were dissatisfied with teaching as a career viewed stress as contributing to a greater percentage of their absences than did teachers who were satisfied. Findings relating job satisfaction and stress have been reported by Pelsma, Richard, Harrington, and Burry (1987, 1989); Reyes (1989); Rottier, Kelly, and Tomhave (1983); and Trendall (1989).

Internally was also positively related to job satisfaction. Powerlessness, which has been associated with an external locus of control (Kalekin-Fishman, 1986; Phares, 1976) has been linked to

lowered job satisfaction in several studies involving educators (Buhler & Roebuck, 1987; Farber, 1984; Ginsberg, Schwartz, Olson, & Bennett, 1987; Schwartz et al., 1983).

#### Recommendations

The findings of this study suggest that [State] educators are experiencing a significant amount of stress related to their everyday job situations and to the [State] Performance-Based Accreditation standards and that this stress is mediated by locus of control. Use of an implementation program such as the Concerns-Based Adoption Model (Hall, Loucks, Rutherford, & Newlove, 1975) may help teachers and principals adjust to the changes in their educational system. Research into the amount of stress and burnout being experienced by educators should be conducted after the full implementation of the [State] Performance-Based Accreditation system in order to determine whether a significant amount of stress exists and to identify potential means for dealing with the stress.

## References

- Adams, D. W. (1975). Tired and frustrated teachers. Today's Education, 64(1), 37, 40-41.
- [State] State Department of Education (1989). The [State] Performance-Based Accreditation System manual. [City], [State]: Author.
- Brimm, J. L. (1983). What stresses school administrators. Theory Into Practice, 22(1), 64-69.
- Buhler, J. H., & Roebuck, F. N. (1987, February). Effects of legislated educational reforms on in-service teachers' perceptions of self, students, and careers. Paper presented at the meeting of the Association of Teacher Educators. Houston, TX. (ERIC Document Reproduction Service No. ED 283 802)
- Farber, B. A. (1984). Teacher burnout: Assumptions, myths, and issues. Teachers College Record, 86, 321-338.
- Farkas, J. (1983). Occupational stress as affected by locus of control and situational powerlessness. Paper presented at the annual meeting of the American Educational Research Association. (ERIC Documentation Reproduction Service No. ED 231 047)
- Friesen, D. (1986, April). Overall stress and job satisfaction as predictors of burnout. Paper presented at the meeting of the American Educational Research Association, San Francisco. (ERIC Document Reproduction Service No. ED 274 698)
- Ginsberg, R., Schwartz, H., Olson, G., & Bennett, A. (1987). Working conditions in urban schools. The Urban Review, 19(11), 3-23.
- Gmelch, W. H., & Swent, B. (1981). Stress and the principalship: Strategies of self-improvement and growth. NASSP Bulletin, 65(449), 16-19.

- Gmelch, W. H., & Swent, B. (1982, March). Management team stressors and their impact on administrators' health. Paper presented at the meeting of the American Educational Research Association, New York. (ERIC Document Reproduction Service No. ED 218 761)
- Hall, G. E., Loucks, S. F., Rutherford, W. S., & Newlove, B. W. (1975). Level of the use of innovation: A framework for analyzing innovation adoption. Journal of Teacher Education, 26(1), 52-56.
- Halpin, G., Harris, K., & Halpin, G. (1985). Teacher stress as related to locus of control, sex, and age. Journal of Experimental Education, 53(3), 136-140.
- Harris, L., Kagay, M., & Leichenko, S. (1985). The Metropolitan Life survey of the American teacher: 1985. (ERIC Reproduction Service No. ED 268 076)
- Hoover-Dempsey, K. V., & Kendall, E. D. (1982). Stress and coping among teachers: Experience in search of theory and science. Nashville, TN: Vanderbilt University. (ERIC Document Reproduction Service No. ED 241 503)
- Ironson, G. H., Smith, P. C., Brannick, M. T., Gibson, W. M., & Paul, K. B. (1989). Construction of a Job in General Scale: A comparison of global, composite, and specific measures. Journal of Applied Psychology, 74(2), 193-200.
- Iwanicki, E. F., & Schwab, R. L. (1981). A cross-validation study of the Maslach Burnout Inventory. Educational and Psychological Measurement, 41, 1167-1174.
- Kalekin-Fishman, D. (1986). Burnout or alienation? A context-specific study of occupational fatigue among secondary teachers. Journal of Research and Development in Education, 19(3), 24-34.
- Kyriacou, C., & Sutcliffe, J. (1978). Teacher stress and satisfaction. Educational Research, 21(2), 89-96.
- Kyriacou, C., & Sutcliffe, J. (1979). A note on teacher stress and locus of control. Journal of Occupational Psychology, 52, 227-228.

- Lam, T. L. J. (1988). External environmental constraints and job-related stress on school administrators. The Journal of Educational Administration, 26(2), 250-265.
- Levenson, H. (1974). Activism and powerful others: Distinctions within the concept of internal-external control. Journal of Personality Assessment, 38, 377-383.
- Levenson, H. (1981). Differentiating among internality, powerful others, and chance. In H. M. Lefcourt (Ed.), Research with the locus of control construct: Vol. 1, Assessment methods (pp. 15-63). New York: Academic Press.
- Manera, E., & Wright, R. E. (1981). Real job pressures: Knowing the difference between stress and challenge. NASSP Bulletin, 65(449), 10-15.
- Maslach, C., & Jackson, S. E. (1986). Maslach Burnout Inventory manual (2nd ed.), Palo Alto, CA: Consulting Psychologists Press.
- Moracco, J. C., D'Arienzo, R. V., & Danford, D. (1983). Comparison of perceived occupational stress between teachers who are contented and discontented in their career choices. The Vocational Guidance Quarterly, 32(1), 44-51.
- Needle, R. H., Griffin, T., Svendsen, R., & Berney, C. (1980). Teacher stress: Sources and consequences. The Journal of School Health, 50(2), 96-99.
- Pelsma, D. M., Richard, G. V., Harrington, R. G., & Burry, J. A. (1987, April). The Quality of Teacher Work Life Survey: A Preliminary report on a measure of teacher stress and job satisfaction and the implications for school counselors. Paper presented at the annual convention of the American Association for Counseling and Development, New Orleans, LA. (ERIC Documentation Reproduction Service No. ED 286 094)
- Pelsma, D. M., Richard, G. V., Harrington, R. G., & Burry, J. A. (1989). The Quality of Teacher Work Life Survey: A measure of teacher stress and job satisfaction. Measurement and Evaluation in Counseling and Development, 21, 165-176.

- Phares, E. J. (1976). Locus of control in personality. Morristown, NJ: General Learning Press.
- Phillips, B. N., & Lee, M. (1980). The changing role of the American teachers: Current and future sources of stress. In C. L. Cooper & J. Marshall (Eds.), White collar and professional stress (pp. 93-111). New York: John Wiley & Sons.
- Reyes, P. (1989). The relationship of autonomy in decision making to commitment to schools and job satisfaction: A comparison between public school teachers and mid-level administrators. Journal of Research and Development in Education, 22(2), 62-69.
- Rottier, J., Kelly, W., & Tomhave, W. K. (1983). Teacher burnout--small and rural school style. Education, 104(1), 72-79.
- Sarros, J. C. (1988). Administrator burnout: Findings and future directions. The Journal of Educational Administration, 26(2), 184-196.
- Saterfiel, T. H., & Woodruff, J. B. (1985, April). A new model for school accreditation: Applying school effectiveness measures to assess educational quality. Paper presented at the meeting of the American Educational Research Association. (ERIC Document Reproduction Service No. ED 255 565)
- Schwab, R. L. (1983). Teacher burnout: Moving beyond psychobabble. Theory Into Practice, 22(1), 21-26.
- Schwartz, H., Olson, G., Bennett, A., & Ginsberg, R. (1983). School as workplace: The realities of stress. Chicago: Roosevelt University. (ERIC Document Reproduction Service No. ED 239 009)
- Selaty, L. J. (1988). Stress, locus-of-control, and powerlessness of directors of special education. Dissertation Abstracts International, 50, 1170A. (University Microfilms No. 88-10, 377)

- Smith, P. C., Kendall, L. H., & Hulin, C. L. (1982). The Job Descriptive Index (rev. ed.). Bowling Green, OH: Bowling Green State University.
- Stroud, S. D. (1987). The relationship of locus of control, powerlessness, and job satisfaction as perceived by nursing faculty (Doctoral dissertation, Auburn University, 1987). Dissertation Abstracts International, 48, 1672A.
- Swick, K. J., & Hanley, P. E. (1980). Stress and the classroom teacher. Washington, DC: National Education Association.
- Trendall, C. (1989). Stress in teaching and teacher effectiveness: A study of teachers across mainstream and special education. Education Research, 31(1), 52-58.
- Weiskopf, P. E. (1980). Burnout among teachers of exceptional children. Exceptional Children, 47, 18-23.

Table 1  
Reliability Coefficients for the Measure of Educator Stress

| Subscale                                | Chronbach's alpha          |                           |
|-----------------------------------------|----------------------------|---------------------------|
|                                         | Survey sample<br>(N = 277) | Pilot sample<br>(N = 236) |
| Job Overload                            | .94                        | .95                       |
| Subordinate-Superordinate Relationships | .92                        | .93                       |
| Relationships with Students             | .92                        | .84                       |
| Relationships with Peers                | .91                        |                           |
| Salary and Compensation                 | .96                        | .86                       |

Table 2  
Variable or Subscale Means and Standard Deviations for Respondent and Nonrespondent  
Samples and Obtained Values of  $t$

| Variable or Subscale                    | M     |       | SD     |        | $t$    |
|-----------------------------------------|-------|-------|--------|--------|--------|
|                                         | NR    | R     | NR     | R      |        |
| Job overload                            | 1.90  | 2.05  | 0.912  | 1.089  | 0.703  |
| Subordinate-superordinate relationships | 1.25  | 1.43  | 1.020  | 1.123  | 0.760  |
| Relationships with students             | 1.45  | 1.92  | 1.146  | 1.077  | 1.782  |
| Relationships with peers                | 0.95  | 1.16  | 0.887  | 1.056  | 1.018  |
| Salary and compensation                 | 2.00  | 1.95  | 1.214  | 1.386  | -0.166 |
| Student performance                     | 0.95  | 1.08  | 0.759  | 0.896  | 0.708  |
| Personnel                               | 0.95  | 0.81  | 1.146  | -0.890 | -0.539 |
| School environment                      | 1.30  | 1.16  | 1.129  | 1.197  | -0.526 |
| Opportunities to learn                  | 1.15  | 1.01  | 1.089  | 1.030  | -0.553 |
| Student progress                        | 1.00  | 1.09  | 0.973  | 1.134  | 0.395  |
| Leadership and planning                 | 1.05  | 0.97  | 0.945  | 0.955  | -0.361 |
| Internal Scale                          | 37.15 | 37.44 | 6.564  | 6.250  | 0.191  |
| Powerful Others Scale                   | 19.70 | 19.75 | 7.138  | 9.021  | 0.028  |
| Chance Scale                            | 14.85 | 14.09 | 7.597  | 7.790  | -0.429 |
| Age                                     | 42.30 | 42.03 | 7.740  | 9.396  | -0.149 |
| Gender                                  | 1.65  | 1.83  | 0.489  | 0.389  | 1.574  |
| Emotional exhaustion                    | 17.55 | 20.23 | 11.335 | 11.276 | 1.020  |
| Depersonalization                       | 3.90  | 5.40  | 4.077  | 5.023  | 1.566  |
| Personal accomplishment                 | 41.65 | 40.35 | 4.648  | 5.964  | -1.179 |

Note.

M = Mean

SD = Standard deviation

NR = Nonrespondent group ( $N = 20$ )

R = Respondent group ( $N = 277$ )

Table 3  
Pearson Correlation Coefficients for Variables in Sets 1 and 2

|                              | LOAD  | SUBSUP | STDNTS | PEERS | SAL   | STPERF | PERS  | SCHENV | OPPLRN | STPRG | LDR   | I     | P     | C     | AGE   | GNDR  | EE    | DP    | PA    |
|------------------------------|-------|--------|--------|-------|-------|--------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Job overload (LOAD           | 1.000 | .5192  | .4717  | .3610 | .6206 | .3321  | .2871 | .2732  | .3831  | .3291 | .3603 | .1833 | .2698 | .1797 | .1310 | .2688 | .6038 | .2872 | .1561 |
|                              | .000  | .000   | .000   | .000  | .000  | .000   | .000  | .000   | .000   | .000  | .000  | .001  | .000  | .001  | .015  | .000  | .000  | .000  | .005  |
| Subordinate Superordinate    | 1.000 | .4747  | .6521  | .4880 | .3566 | .3362  | .3387 | .3707  | .3946  | .4075 | .1623 | .3166 | .2029 | .1331 | .1380 | .4287 | .3269 | .1451 |       |
| relationships (SUBSUP)       |       | .000   | .000   | .000  | .000  | .000   | .000  | .000   | .000   | .000  | .004  | .000  | .000  | .013  | .011  | .000  | .000  | .008  |       |
| Relationships with           |       | 1.000  | .3524  | .3599 | .3105 | .2938  | .3134 | .3602  | .3901  | .3837 | .1492 | .2951 | .3282 | .0916 | .2007 | .4901 | .3715 | .2308 |       |
| student (STDNTS)             |       |        | .000   | .000  | .000  | .000   | .000  | .000   | .000   | .000  | .006  | .000  | .000  | .064  | .000  | .000  | .000  | .000  |       |
| Relationships with peers     |       |        | 1.000  | .3112 | .3017 | .2369  | .3152 | .2895  | .2965  | .3587 | .0805 | .2080 | .2217 | .1563 | .0674 | .2209 | .2060 | .0412 |       |
| (PEERS)                      |       |        |        | .000  | .000  | .000   | .000  | .000   | .000   | .000  | .091  | .000  | .000  | .005  | .132  | .000  | .000  | .171  |       |
| Salary and compensation      |       |        |        | 1.000 | .2724 | .2423  | .2305 | .2933  | .2543  | .2887 | .1367 | .2678 | .1865 | .1320 | .1185 | .4515 | .2858 | .7288 |       |
| (SAL)                        |       |        |        |       | .000  | .000   | .000  | .000   | .000   | .000  | .011  | .000  | .001  | .014  | .024  | .000  | .000  | .002  |       |
| Student performance          |       |        |        |       | 1.000 | .5134  | .4412 | .4792  | .4282  | .5399 | .1251 | .2275 | .1543 | .1297 | .0142 | .1569 | .1872 | .0457 |       |
| (STPERF)                     |       |        |        |       |       | .000   | .000  | .000   | .000   | .000  | .019  | .000  | .005  | .015  | .408  | .000  | .000  | .000  |       |
| Personnel (PERS)             |       |        |        |       |       | 1.000  | .7293 | .7096  | .6345  | .6827 | .1723 | .1699 | .1478 | .1234 | .0190 | .2071 | .2150 | .2117 |       |
|                              |       |        |        |       |       |        | .000  | .000   | .000   | .000  | .002  | .002  | .007  | .020  | .376  | .000  | .000  | .000  |       |
| School environment           |       |        |        |       |       |        | 1.000 | .7993  | .7635  | .7761 | .1393 | .1783 | .1588 | .0995 | .0016 | .2820 | .3035 | .2856 |       |
| (SCHENV)                     |       |        |        |       |       |        |       | .000   | .000   | .000  | .010  | .001  | .004  | .049  | .490  | .000  | .000  | .000  |       |
| Opportunities to learn       |       |        |        |       |       |        |       | 1.000  | .7722  | .7907 | .1312 | .1857 | .1568 | .1666 | .0303 | .3141 | .3487 | .2538 |       |
| (OPPLRN)                     |       |        |        |       |       |        |       |        | .000   | .000  | .014  | .001  | .004  | .003  | .308  | .000  | .000  | .000  |       |
| Student progress (STPRG)     |       |        |        |       |       |        |       |        | 1.000  | .7925 | .1676 | .2322 | .1680 | .0980 | .0758 | .2795 | .3070 | .2646 |       |
|                              |       |        |        |       |       |        |       |        |        | .000  | .003  | .000  | .003  | .052  | .104  | .000  | .000  | .000  |       |
| Leadership and Planning      |       |        |        |       |       |        |       |        |        | 1.000 | .1759 | .2478 | .1773 | .1049 | .0055 | .3053 | .3044 | .2469 |       |
| (LDR)                        |       |        |        |       |       |        |       |        |        |       | .002  | .000  | .002  | .041  | .464  | .000  | .000  | .000  |       |
| Internal (I)                 |       |        |        |       |       |        |       |        |        |       | 1.000 | .1273 | .1838 | .1012 | .2012 | .2966 | .1551 | .1834 |       |
|                              |       |        |        |       |       |        |       |        |        |       |       | .017  | .001  | .046  | .000  | .000  | .005  | .001  |       |
| Powerful others (P)          |       |        |        |       |       |        |       |        |        |       |       | 1.000 | .6311 | .0119 | .0670 | .3076 | .2349 | .2047 |       |
|                              |       |        |        |       |       |        |       |        |        |       |       |       | .000  | .422  | .133  | .000  | .000  | .000  |       |
| Chance (C)                   |       |        |        |       |       |        |       |        |        |       |       |       | 1.000 | .1004 | .1011 | .3090 | .2232 | .2202 |       |
|                              |       |        |        |       |       |        |       |        |        |       |       |       |       | .048  | .046  | .000  | .000  | .000  |       |
| Age                          |       |        |        |       |       |        |       |        |        |       |       |       |       | 1.000 | .0585 | .1204 | .1343 | .0233 |       |
|                              |       |        |        |       |       |        |       |        |        |       |       |       |       |       | .166  | .023  | .013  | .350  |       |
| Gender (GNDR)                |       |        |        |       |       |        |       |        |        |       |       |       |       |       | 1.000 | .1206 | .0692 | .0860 |       |
|                              |       |        |        |       |       |        |       |        |        |       |       |       |       |       |       | .022  | .130  | .077  |       |
| Emotional exhaustion (EE)    |       |        |        |       |       |        |       |        |        |       |       |       |       |       |       | 1.000 | .6062 | .3492 |       |
|                              |       |        |        |       |       |        |       |        |        |       |       |       |       |       |       |       | .000  | .000  |       |
| Depersonalization (DP)       |       |        |        |       |       |        |       |        |        |       |       |       |       |       |       |       | 1.000 | .3560 |       |
|                              |       |        |        |       |       |        |       |        |        |       |       |       |       |       |       |       |       | .000  |       |
| Personal accomplishment (PA) |       |        |        |       |       |        |       |        |        |       |       |       |       |       |       |       |       | 1.000 |       |

Table 4  
Canonical Weights of the Three Possible Canonical Roots

| Variable                                | Root 1  |          | Root 2  |          | Root 3  |          |
|-----------------------------------------|---------|----------|---------|----------|---------|----------|
|                                         | Raw     | Standard | Raw     | Standard | Raw     | Standard |
| SET 1                                   |         |          |         |          |         |          |
| Job overload                            | .53662  | .58176   | .70163  | .76065   | -.24056 | -.26080  |
| Subordinate-superordinate relationships | .19960  | .22409   | -.03488 | -.03916  | .21692  | .24353   |
| Relationships with students             | .28058  | .30224   | -.18380 | -.19799  | .25535  | .27506   |
| Relationships with peers                | -.23694 | -.24989  | .04027  | -.04247  | .33924  | .35779   |
| Salary and compensation                 | .05987  | .08275   | -.11014 | -.15224  | .01917  | .02649   |
| Student performance                     | -.26353 | -.23603  | .08515  | .07627   | .54688  | .48982   |
| Personnel                               | -.17446 | -.15535  | .05691  | .05068   | -.46899 | -.41763  |
| School environment                      | .25453  | .30477   | -.14100 | -.16883  | -.32972 | -.39479  |
| Opportunities to learn                  | .04225  | .04345   | -.43277 | -.44513  | .70252  | .72258   |
| Student progress                        | -.09550 | -.10753  | -.29345 | -.33042  | .11574  | -.13033  |
| Leadership and planning                 | .04663  | .04427   | .19235  | .18259   | -.22968 | .21803   |
| Internal                                | -.03978 | -.24866  | .00686  | .04289   | .03251  | .20318   |
| Powerful others                         | .00219  | .01976   | -.00944 | -.08516  | .01978  | .17842   |
| Chance                                  | .02763  | .21521   | -.02317 | -.18047  | -.07137 | -.55597  |
| Age                                     | -.00340 | -.03177  | .00553  | .05164   | -.02970 | .27757   |
| Gender                                  | -.43698 | .16982   | 1.19564 | .46464   | -.00911 | -.00354  |
| SET 2                                   |         |          |         |          |         |          |
| Emotional exhaustion                    | .08383  | .94531   | .07517  | .84757   | -.01307 | -.14740  |
| Depersonalization                       | -.00538 | -.02702  | -.17317 | -.86993  | .18729  | .94081   |
| Personal accomplishment                 | -.02829 | -.16872  | .10624  | .63363   | .14553  | .85793   |

Table 5  
Eigenvalues and Canonical Correlations

| Statistic             | Root 1   | Root 2   | Root 3  |
|-----------------------|----------|----------|---------|
| Eigenvalue            | 1.14013  | 0.19542  | 0.07090 |
| Percentage            | 81.05972 | 13.89398 | 5.04631 |
| Canonical correlation | .72989   | .40432   | .25744  |
| Squared correlation   | .53274   | .16348   | .06627  |

Table 6  
Wilks' Lambda and Level of Significance of the Three Possible Canonical Roots

| Roots  | Wilks' lambda | F     | df    | Significance of F |
|--------|---------------|-------|-------|-------------------|
| 1 to 2 | .365          | 6.455 | 48.00 | .000              |
| 2 to 3 | .7811         | 2.270 | 30.00 | .000              |
| 3 TO 3 | .9337         | 1.318 | 14.00 | .196              |

Table 7  
Canonical Loadings, Cross-Loadings, Adequacy, and Redundancy  
of the Two Significant Canonical Roots

| Variable                                | Canonical loading |                  | Canonical cross-loading |        |
|-----------------------------------------|-------------------|------------------|-------------------------|--------|
|                                         | Root 1            | Root 2           | SET 1<br>Root 1         | Root 2 |
| Job overload                            | .8108             | .4018            | .5893                   | .1629  |
| Subordinate-superordinate relationships | .5817             | -.0334           | .4209                   | -.0130 |
| Relationships with students             | .6779             | -.1349           | .4922                   | -.0541 |
| Relationships with peers                | .2932             | -.0459           | .2102                   | -.0181 |
| Salary and compensation                 | .6171             | .0598            | .4482                   | .0246  |
| Student performance                     | .2274             | -.1512           | .1509                   | -.0589 |
| Personnel                               | .3188             | -.3617           | .2257                   | -.1456 |
| School environment                      | .4275             | -.5104           | .3065                   | -.2060 |
| Opportunities to learn                  | .4608             | -.4906           | .3304                   | -.1979 |
| Student progress                        | .4192             | -.4902           | .3006                   | -.1979 |
| Leadership and planning                 | .4508             | -.4028           | .3221                   | -.1625 |
| Internal                                | -.4215            | .0000            | -.3071                  | -.0002 |
| Powerful others                         | .4347             | -.1907           | .3152                   | -.0760 |
| Chance                                  | .4555             | -.2568           | .3316                   | -.1035 |
| Age                                     | -.1548            | .0738            | -.1141                  | .0296  |
| Gender                                  | .1381             | .5336            | .1014                   | .2158  |
| Adequacy index                          |                   | Redundancy index |                         |        |
| Root 1                                  | .2123             | Root 1           | .1131                   |        |
| Root 2                                  | .1019             | Root 2           | .0167                   |        |
| SET 2                                   |                   |                  |                         |        |
| Emotional exhaustion                    | .9879             | .0989            | .7210                   | .0398  |
| Depersonalization                       | .6061             | -.5817           | .4443                   | -.5817 |
| Personal accomplishment                 | .6061             | -.3564           | -.3564                  | .2614  |
| Adequacy index                          |                   | Redundancy index |                         |        |
| Root 1                                  | .5275             | Root 1           | .2810                   |        |
| Root 2                                  | .2557             | Root 2           | .0418                   |        |

Table 8  
Multiple Regression: Survey Sample

| Variable                                | R       | Beta    | t      | Sign. of t |
|-----------------------------------------|---------|---------|--------|------------|
| Job overload                            | -0.4047 | -0.0422 | -0.519 | .6045      |
| Subordinate-superordinate relationships | -1.7663 | -0.1906 | -2.193 | .0292      |
| Relationships with students             | -2.2390 | -0.2319 | -3.286 | .0012      |
| Relationship with peers                 | 0.3363  | 0.0341  | 0.447  | .6556      |
| Salary and compensation                 | -0.8717 | -0.1158 | -1.567 | .1184      |
| Student performance                     | 0.4126  | 0.0355  | 0.505  | .6140      |
| Personnel                               | -0.5375 | -0.0460 | -0.513 | .6086      |
| School environment                      | -0.8800 | -0.1013 | -0.912 | .3625      |
| Opportunities to learn                  | 0.6826  | 0.0675  | 0.505  | .5511      |
| Student progress                        | 1.5535  | 0.1682  | 1.604  | .1099      |
| Leadership and planning                 | -0.0239 | -0.0022 | -0.019 | .9847      |
| Internal                                | 0.2376  | 0.1428  | 2.419  | .0162      |
| Powerful others                         | 0.0402  | 0.0348  | 0.457  | .6480      |
| Chance                                  | -0.0576 | -0.0506 | -0.669 | .5041      |
| Age                                     | -0.0171 | -0.0153 | -0.265 | .7910      |
| Gender                                  | 1.5025  | 0.0561  | 0.933  | .3519      |
| (Constant)                              | 44.2959 |         |        |            |

Multiple R = .4413

Multiple R<sup>2</sup> = .1749

Table 9  
Analysis of Variance: Survey Sample

| Source     | <u>df</u> | <u>SS</u>  | <u>F</u> | <u>P</u> |
|------------|-----------|------------|----------|----------|
| Regression | 16        | 5815.8720  | 3.92993  | .00001   |
| Residual   | 260       | 24048.2725 |          |          |

Table 10  
Fisher's  $z$  Test for Cross-Validation of  
the First Canonical Correlation

| Root 1<br>canonical R | <u>Zr</u> | Cross<br>validation R | <u>Zr</u> | <u>Zr</u><br>difference | <u>z</u> |
|-----------------------|-----------|-----------------------|-----------|-------------------------|----------|
| .7299                 | .929      | .7003                 | .867      | .062                    | .486     |
| Root 2<br>canonical R | <u>Zr</u> | Cross<br>validation   | <u>Zr</u> | <u>Zr</u><br>difference | <u>z</u> |
| .4043                 | .430      | .3893                 | .412      | .018                    | .141     |

Table 11  
Fisher's  $z$  Test for Cross-Validation of the  
Multiple Regression Analysis

| Analysis sample<br>multiple R | <u>Zr</u> | Cross<br>validation | <u>Zr</u> | <u>Zr</u><br>difference | <u>z</u> |
|-------------------------------|-----------|---------------------|-----------|-------------------------|----------|
| .5259                         | .590      | .4162               | .448      | .142                    | 1.113    |